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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,179	06/12/2000	Peter Gerber	80058-004800US	5364

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EXAMINER

NGUYEN, NAM V

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 10/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/592,179

Applicant(s)

GERBER ET AL.

Examiner

Nam V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6-8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

The application of Gerber et al. for an "interrogation and responder system" filed June 12, 2000 has been examined.

This application claims foreign priority based on the application 0943/00 filed May 12, 2000 in Switzerland. Receipt is acknowledged of papers submitted under 35 U.S.C 119(a) – (d), which papers have been placed of record in the file.

An amendment to the claims 1-9 have been entered and made of record.

Claims 1-9 are pending.

### ***Drawings***

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The drawings are objected to under 37 CFR 1.83(a) because they fail to label boxes (11, 13-16, 21 and 23-26) in Figures 1 and 2 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

The drawings must show every feature of the invention specified in the claims 1 and 9. Therefore, the respond device in Figure 1 or the interrogation system in Figure 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

*mvt*  
*10/24/2* The following title is suggested: interrogation and responder system <sup>for</sup> ~~of~~ identifying a target.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Isepo et al. (US# 5,583,507) in view of Fuchter et al. (US# 6,140,982).

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Referring to claims 1 and 9, D'Isepo et al. disclose an interrogation system (column 2 lines 6 to 12; See Figure 1) comprising a transmitting device (40; see Figure 5) for the interrogation of a responder device (10), and receiving means (130), wherein the transmitting device (40) is designed in such a way that modulated and/or coded electromagnetic radiation can be transmitted (column 9 line 59 to column 10 line 11; column 8 lines 52 to 61), and wherein the responder device (10) has an evaluation unit (71) for processing the electrical signal (column 5 lines 65 to column 6 lines 8), as well as transmitting means (65) in order to return (column 6 lines 9 to 34), in accordance with a decision made by the evaluation unit (71), a reply signal to the receiving means (130), wherein the transmitting device (40) contains a control circuit(140) and an antenna (120) which are designed in such a way that individual electromagnetic pulses, or short bursts of pulses, can be generated in the giga-frequency range (i.e. 2-100 Ghz), which are radiated by the antenna (120) in a chronologically modulated and directional manner (column 2 lines 28 to 39; column 9 lines 3 to 23).

However, D'Isepo et al. did not explicitly disclose wherein said the responder device (10) has sensor means for receiving this radiation and for converting it into electrical signals.

In the same field of endeavor of identifying a target as a friend or foe, Fuchter et al. teach that wherein said the responder device (see Figure one) has sensor means (i.e. MF) for receiving this radiation and for converting it into electrical signals (column 2 lines 8 to 31; column 4 line 66 to column 5 line 14) in order for the analog/digital converter digitized and evaluated by the decoder and the controller.

One of ordinary skilled in the art recognizes the need to convert the radiated receiving signal into analog/digital signal to matching the coding of the responding wave of Fuchter et al.

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in the encoder/controller of the passive identification apparatus of D'Isepo et al. because D'Isepo et al. suggest it is desired to provide that encoder/controller can include a receiver for receiving a remotely transmitted signal indicative of a desired code pattern and also direct the changing codes based on the received input(column 4 lines 35 to 45) and Fuchter et al. teach that the responder device has a mixer, demodulator and matching filter for converting the receiving signal into electrical signal in order to for the analog/digital converter digitized and for the decoder and the controller evaluated the receiving signal (column 2 lines 8 to 31). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to convert the radiated receiving signal into analog/digital signal to matching the coding of the responding wave of Fuchter et al. in the encoder/controller of the passive identification apparatus of D'Isepo et al. with the motivation for doing so would have been to provide the microprocessor process receiving signal to indicate whether a detected target is to be classified as a friendly target or a threatening target.

Referring to claim 2, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 1, D'Isepo et al. disclose wherein a control circuit (140) and an antenna (120 and 130) are placed into a transmitting device housing (40), which is designed for being mounted on a weapon (20) (column 3 lines 47 to 56).

Referring to claim 3, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 2, D'Isepo et al. disclose wherein the antenna (65; see Figure 4a) is integrated into a control circuit (65 and 69) (column 5 line 65 to column 6 line 8).

Referring to claim 4, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 1, Fuchter et al. disclose wherein the frequency of the pulses (IS; see Figure 1) transmitted by the transmitting device has a value, by means of which, using the antenna (SE), a strongly direction radiating characteristic with an angle of the radiated lobe below 50 mrad (i.e. 10 degree maximum) is achieved (column 4 lines 10 to 22).

Referring to claim 5, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 1, D'Isepo et al. disclose wherein the modulation frequency of the transmitting device (120) lies in the range between 10 and 1000 Ghz, or 100 to 1000 Ghz (column 2 lines 19 to 27; column 9 lines 9 to 14).

Referring to claim 7, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 1, D'Isepo et al. disclose wherein sensor means (71) of the responder device (10) are designed to be received in a portable harness system (30) (column 3 lines 48 to 67).

Referring to claim 8, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 1, D'Isepo et al. disclose wherein it (20) can be integrated into a weapon (i.e. combat aircraft; see Figure 1) (column 3 lines 48 to 67).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over D'Isepo et al. (US# 5,583,507) in view of Fuchter et al. (US# 6,140,982) as applied to claim 1 above, and further in view of Wagner (US# 5,130,713).

Referring to claim 6, D'Isepo et al. in view of Fuchter et al. disclose the interrogation system in accordance with claim 1, however, D'Isepo et al. in view of Fuchter et al. did not explicitly disclose wherein the sensor means of the responder device are designed to transmit response signals, which can be received by the transmitting device in order to also make possible a distance measurement between the transmitting device and the responder device in a central unit of the transmitting device.

In the same field of endeavor of identifying a target as a friend or foe, Wagner teaches that the sensor means (TOG; see Figure 6) of the responder device (HAE) are designed to transmit response signals (HAS), which can be received by the transmitting device (HFS) in order to also make possible a distance measurement between the transmitting device (HFS) and the responder device (HAE) in a central unit (AW) of the transmitting device (HFS) (column 6 lines 17 to 30).

One of ordinary skilled in the art recognizes using the reply signal of the reply transmitter to determine a distance measurement of Wagner in the processor of the interrogator of D'Isepo et al. because D'Isepo et al. suggest it is desired to provide that encoder/controller can be readable at a long distance in any environment (column 2 lines 6 to 12) and the interrogator can be located at any distance from the person or object to be identified (column 8 lines 52 to 61) and Fuchter et al. teach that the transit time determination within the framework between the HF transmitting



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device and the HF receiving device to determine the distance measurement (column 6 lines 17 to 30). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the reply signal of the reply transmitter to determine a distance measurement of Wagner in the processor of the interrogator of D'Isepo et al. with the motivation for doing so would have been to provide a useful information of a distance measurement between an interrogator and a transponder for the identification friend or foe system.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mouldin et al. (US# 5,231,400) disclose a covert electronic battlefield identification system.

Jalink, Jr. et al. (US# 5,396,243) disclose an infrared laser battlefield identification beacon.

Hulderman et al. (US# 6,025,795) disclose missile shield.

Kiser (US# 6,097,330) discloses an optical friendly fire avoidance system.

Richmond et al. (US# 6,420,995) disclose radar and IFF system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 703-305-3867. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nam Nguyen  
October 19, 2002



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